Title Slide

* My name is Jai Holt. I am a Masters student studying applied economics with BIP project director Kathy Baylis
* This year I was tasked with some of the data collected and analysis for the Tier 6 pollinations survey and have been asked to share some of the results

Introduction

-The tier 6 survey is a short survey given to honey bee brokers regarding their placements of colonies in California almonds

-Objective. Our objective for conducting this survey is to indirectly measure the health of the honey bee industry.

In addition, we hope to add to the existing survey data by including brokers outside of California and by collecting pertain information such as colony grade and colony shortage estimates

Methods: these survey are collected by phone after the almond bloom

We found that colony rental price is increasing but at a decreasing rate

\*\*\*\*look at CSBA numbers for comparison\*\*\*\*

Methods

Our methods are simple, we just called the brokers post almond bloom and ask a series of 20 questions. Responses are optional. We ask questions about colony pricing. # of placements.

Shortages and grade

Results

We have been grateful to receive about 20 response every year since the beginning of the survey in 2010. 13 brokers were kind enough to complete the survey in all 4 years and for the purposes of this study I used data from this panel of respondents

We believe there to be about 30-40 honey bee brokers in the industry

Subsample represent 33-43% of all brokers……and we are always grateful for more responses

Average Colony Price

As an economist, I always like to look at dollars first.

Here we have the average rental cost by year from 2010 with confidence intervals

As you can see, the rental price appears to be leveling off

Looking at the table below you can see that bother the minimum and maximum prices have also rise over the survey period

\*\*\*\* initially these results appear to support the argument that colony price is immune to shocks in overwintering loss\*\*\*

What drives costs?

Direct

Demand

Supply- Quality and quantity

Indirect

Cost of almonds

Cost of colony supply inputs- fuel, bee treatment

Also, worth at least mentioning is opportunity cost. The cost of honey production or alternative use of bees – as honey producing becomes more lucrative the price of colony rentals rise

In light of these factors we expect to drive costs, let’s look at what actually happened over the last 4 years.

Demand

The number of Almond bearing acres has been increasing as illustrated by the green line. The rise in colony rental price closely follows rental price

Supply

Now let’s look at what we are really interested in, the supply side of colony rental price

The supply of colonies rose over the survey period, following the demand increase

The survey results suggest that on average the brokers place 2 colonies per acre

Shortages

Next we consider shortages,

“How many colonies, that were committed for pollination, were you and/or those beekeepers you broker for short?”

By summing these the number supplied and the number short we get a rough sense of the colonies demanded.

Shortages and Winter loss

Here we have another look at shortages in the pink bars. When we compare these the overwintering losses reported in MS. Steinhauers winter loss report, we are reassured to see a similar dip in 2012 reflecting the relationship between wintering loss and shortages.

\*\*\*emphasize this point\*\*\*

Colony Grade

Now for a quick look at the grade of colonies over the survey period. Colony grade was near 10 in all years with the highest average grade in 2012.

Finally bring it back to costs- I have a comparison here average rental cost here compare with a frame weighted measure of costs

The frame weighted measure- is calculated by taking the average colony rental cost and dividing it by the average colony grade and then multiplying it by then.

I think this frame weighted cost is a superior measure of colony cost because it reflects to a degree the quality variation between years.

Frame weighted and winter loss

Taking one more look at the frame weighted cost vs. the average cost we find that in the frame weight measure better reflects the dip in 2012 in overwinter loss.

Indicating that overwintering loss is in fact reflected in colony rental price when the grade is considered

Compare with CSBA